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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/527,508      | 03/10/2005  | Stefan N. Chivarov   | 30940/32000         | 9935             |

4743 7590 04/17/2007  
MARSHALL, GERSTEIN & BORUN LLP  
233 S. WACKER DRIVE, SUITE 6300  
SEARS TOWER  
CHICAGO, IL 60606

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| EXAMINER |
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NGUYEN, PHUNG

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| ART UNIT | PAPER NUMBER |
|----------|--------------|

2612

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE  | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS                               | 04/17/2007 | PAPER         |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/527,508

Applicant(s)

CHIVAROV, STEFAN N.

Examiner

Phung T. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Objections*

1. Claims 5-20 are objected to because of the following informalities:

Claim 5, line 10, change “, and adapted to” to --.--

Claim 6-20 are objected for incorporating the above deficiency by dependency.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ragner et al. (U.S. Pat. 6,175,196) in view of Yu (U. S. Pat. 6,072,386).

**Regarding claim 1:** Ragner et al. disclose photo-sensitive illuminated skate wheel comprising light sources including a plurality of light emitting diodes, evenly disposed in an array on a substrate, an independent power supply and mounted on the substrate, and a synchronization sensor connected to the Integrated Circuit, the substrate is flexible, and the synchronization sensor responds to gravity when mounted on a rotating surface, whose rotation axis is not perpendicular to the earth's surface or if the rotation axis is perpendicular to the earth's surface, the synchronization sensor is actuated at a position relative to a given immovable point, and wherein a light sensor is connected to the Integrated Circuit which in turn is connected to a

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control panel, the two sensors and the controlling panel are disposed on the substrate and the Integrated Circuit has a serial interface (Fig. 1, col. 2, lines 50-56, col. 3, lines 60-65, col. 4, lines 30-40, and col. 6, lines 49-61). Ragner et al. do not specifically teach a microcontroller as claimed. However, Yu discloses bicycle spoke warning light device capable of setting and displaying characters comprising the microcontroller 331 containing a library with a plurality of different visual patterns (col. 1, lines 37-42). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the teaching of Yu in the system of Ragner et al. in order to enhance the device by displaying a preset picture or character. Ragner et al. and Yu do not teach the LEDs being of one or various colors, wherein the LEDs are RGB. Since Ragner et al. and Yu disclose the use of the LEDs, it would be obvious to the skilled artisan to use the LEDs having the same or different colors if desired.

**Regarding claim 2:** Refer to claim 1 above Yu disclose wherein these groups of LEDs are arranged in one of an array, a checkered pattern, or in any other preset pattern in the same plane or at various distances from the substrate (col. 5, lines 1-6).

**Regarding claim 3:** Yu discloses wherein the substrate is hard and has a preset profile (fig. 7, col. 2, lines 25-30).

**Regarding claim 4:** Ragner et al. and Yu do not specifically teach wherein the bottom of the substrate is covered with a sticky foil as claimed. However, Ragner et al. disclose a device for visualization of information on a rotating visible surface that can be placed in the proper position on the wheel (col. 6, lines 49-52). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the sticky foil in the system of Ragner et al. and Yu as needed.

**Regarding claim 5:** All the claimed subject matter is already discussed in respect to claim 1 above.

**Regarding claim 6:** Yu discloses wherein the microcontroller comprises a programmable microcontroller adapted to receive data via an interface and to store the data in a memory, wherein the data comprises data relating to visual patterns displayed by the plurality of light sources (col. 2, lines 25-32).

**Regarding claim 7:** Ragner et al. disclose an independent power supply (col. 3, lines 60-65).

**Regarding claim 8:** Ragner et al. disclose altering power consumption from the power supply in response to a signal from the light sensor, and to provide signals to the plurality of light sources in response to the light sensor (col. 2, lines 66-67, and col. 3, lines 1-3).

**Regarding claim 9:** Ragner et al. disclose wherein the Integrated Circuit is adapted to activate a timer and to provide signals to activate the plurality of light sources in response to the timer (col. 8, lines 26-35).

**Regarding claim 10:** Ragner et al. disclose wherein the synchronization sensor is adapted to control signals transmitted between the Integrated Circuit and the light sensor (col. 4, lines 30-40).

**Regarding claim 11:** Ragner et al. disclose wherein the plurality of light sources comprises a plurality of light emitting diodes evenly disposed on the substrate (col. 5, lines 1-14).

**Regarding claims 12 and 13:** Refer to claim 1 above.

**Regarding claim 14:** Yu discloses wherein the plurality of light sources are operatively coupled to the controller via a driver (col. 2, lines 12-16).

**Regarding claim 15:** Yu discloses wherein the substrate comprises a flexible substrate as seen in figure 7.

**Regarding claim 16:** Refer to claim 3 above.

**Regarding claim 17:** Ragner et al. disclose a control panel disposed on the substrate and operatively coupled to the integrate circuit, the light sensor and the synchronization sensor (col. 3, lines 60-65).

**Regarding claim 18:** Yu discloses wherein the microcontroller comprises a serial interface as seen in figure 5.

**Regarding claim 19:** Refer to claim 1 above. Yu discloses wherein the substrate may accommodate additional P parallel groups of LEDs, containing the same or different numbers of LEDs, wherein the groups of LEDs are arranged in a preset pattern in the same plane or at various distances from the substrate as shown in figures 6 and 7.

**Regarding claim 20:** Refer to claim 4 above.

### ***Conclusion***

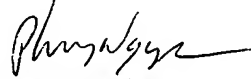
4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phung T Nguyen whose telephone number is 571-272-2968. The examiner can normally be reached on 8:00am-4:30pm Mon thru. Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel J. Wu can be reached on 571-272-2964. The fax numbers for the organization where this application or proceeding is assigned is 571-273-8300.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2600.

Date: April 12, 2007

  
**PHUNG T. NGUYEN**  
**PRIMARY EXAMINER**